

APPENDIX 5-O
SEDIMENT POND MATERIAL

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Over the life of the mine, sediment from the disturbed area will accumulate in sediment ponds “A”, “B” and “C”. In order to comply with requirements for available runoff storage, sediment materials will be removed from the ponds and taken to the sediment pond waste storage area shown on [Plate 5-2C](#). Because the Trail Canyon Mine site (ACT/015/021) is a reclaimed site, sediment material removed from the Trail Canyon sediment pond will also be taken to the sediment pond waste storage area shown on [Plate 5-2C](#).

The following items apply to placement of the sediment (fill) material:

- a. The sediment pond storage area lies within the disturbed area and all runoff passing through the area will pass through required sediment control structures ([Plate 7-1](#)).
- b. The disposal area is only moderately sloping and very stable with an overall slope of approximately 1x: 6h. This slope will be maintained.
- c. The sediment pond fill material will be taken from the pond and placed in horizontal lifts not to exceed 24 in. The material will be compacted to reduce erosion. During the life of the mine the total depth of the material will not exceed 4 ft in any one location.

- d. Due to the nature of the site the material will be covered with coal storage for most of the calendar year. This will help improve and maintain stability and increase compaction.
- e. The fill shall be inspected by a qualified professional or registered professional engineer during placement and compaction of fill materials. A certified report will be provided to UDOGM within two weeks after each inspection. A copy of the report will be retained at the mine site.
- f. As the pond is being cleaned, temporary sediment material storage will be in the area shown on [Plate 5-2C](#) along the road and truck loading area.
- g. While located in the temporary storage area two composite random samples will be taken and tested following the laboratory methodologies, and constitutions analyzed as listed in [Table 5O-1](#).

Parameters	Reported As	Suggested Methods
pH		ASA Mono. No. 9, Part 2, (2 ed), 1982. Method 10-3.2, page 171. Perform pH on saturated paste.
Electrical Conductivity (ECe)	mmhos/cm 25°C	ASA Mono. No. 9, Part 2 (2 ed), 1982. Method 10-3.3, pages 172-173.
Saturation Percentage	%	SP = 100(total wt of water)/ (wt of oven-dry soil). Wts of water and soil known when making a saturated paste.
Particle Size Analysis (texture)	% sand, silt, clay	Hydrometer method. Black et al. 1965. Methods of soil analysis. ASA Mono No. 9, Part 1, method 43-5, pages 562-566.
Soluble Ca, Mg and Na	me/l	ASA Mono. No. 9, Part 2, (2 ed), 1982. Method 10-3.4. pages 173-174.
Sodium Adsorption Ratio	SAR calculated from soluble Ca, Mg & Na	$\frac{[Na^+]}{([Ca^{2+} + Mg^{2+}]/2)^{0.5}}$
Selenium	mg/Kg	Extraction by ASA Mono. No. 9, Part 2 (1 ed), 1965. Method 80-3.2, page 1122. Analyze by Hydride generation for AA or ICP. ASA Mono. No. 9, Part 2 (2 ed), 1982. Method 3-5.5, pages 59-61.

Table 50-1 Analytical Parameters for Overburden

Parameters	Reported As	Suggested Methods
Total N	%	ASA Mono. No. 9, Part 2 (2 ed), 1982. Method 31-3, pages 610-616.
Nitrate-N	mg/Kg	ASA Mono No. 9, Part 2 (2 ed), 1982. Methods 33-4.1, pages 643-645; 33-8.3, pages 679-682 or Sims J. R., and G. D. Jackson. 1977. Soil Sci. Soc. Am. Proc. 35:603-607.
Boron	mg/Kg	ASA Mono No. 9, Part 2 (2 ed), 1982. Method 25-9.1, page 443 for extraction and Method 25-5, pages 443-446 for analysis.
Maximum Acid Potential	%	US EPA. 1978. EPA - 600/2-78-054. Method 3.2.4, Page 51.
Neutralization Potential	%	US EPA. 1978. EPA - 600/2-28-054. Method 3.2.3, page 47.
Organic Carbon	%	ASA Mono No. 9, Part 2 (2 ed), 1982. Method 29-3.5.3, pages 571-573.
Exchangeable Sodium*		ASA Mono No. 9, Part 2 (2 ed), 1982. Method 13-4.4, pages 238-241. Using Flame Emission and using extractates in method 8-3, page 152.
Available Water Capacity	in/in	USDA SCS Soil Survey Investigation Report No. 1, Method 4C1, page 24.

Table 50-1 Analytical Parameters for Overburden (Cont)

Parameters	Reported As	Suggested Methods
Rock Fragments	% Volume	USDA SCS Soil Survey Investigation Report No. 1, Method 3B, Page 18.

Acid/Base Account AB = Total Neutralizing Potential minus Total Acid Potential.

*If samples have a SAR greater than 12 for clay textured soils or greater than 15 for sandy textured soils, then exchangeable sodium % should be analyzed.

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